

Appendix C

Correlated PM₁₀ Concentrations and Winds

The following graphs illustrate the direct correlation between wind speeds¹ and PM₁₀ concentrations at select monitoring sites within the Salton Sea Air Basin on May 20 and May 21, 2016. Note a variety of instruments measure wind speed at different times during any given hour. Therefore, the following graphs reflect the hour of the wind measurement.

IMPERIAL COUNTY SITES (Figures C-1 to C-5)

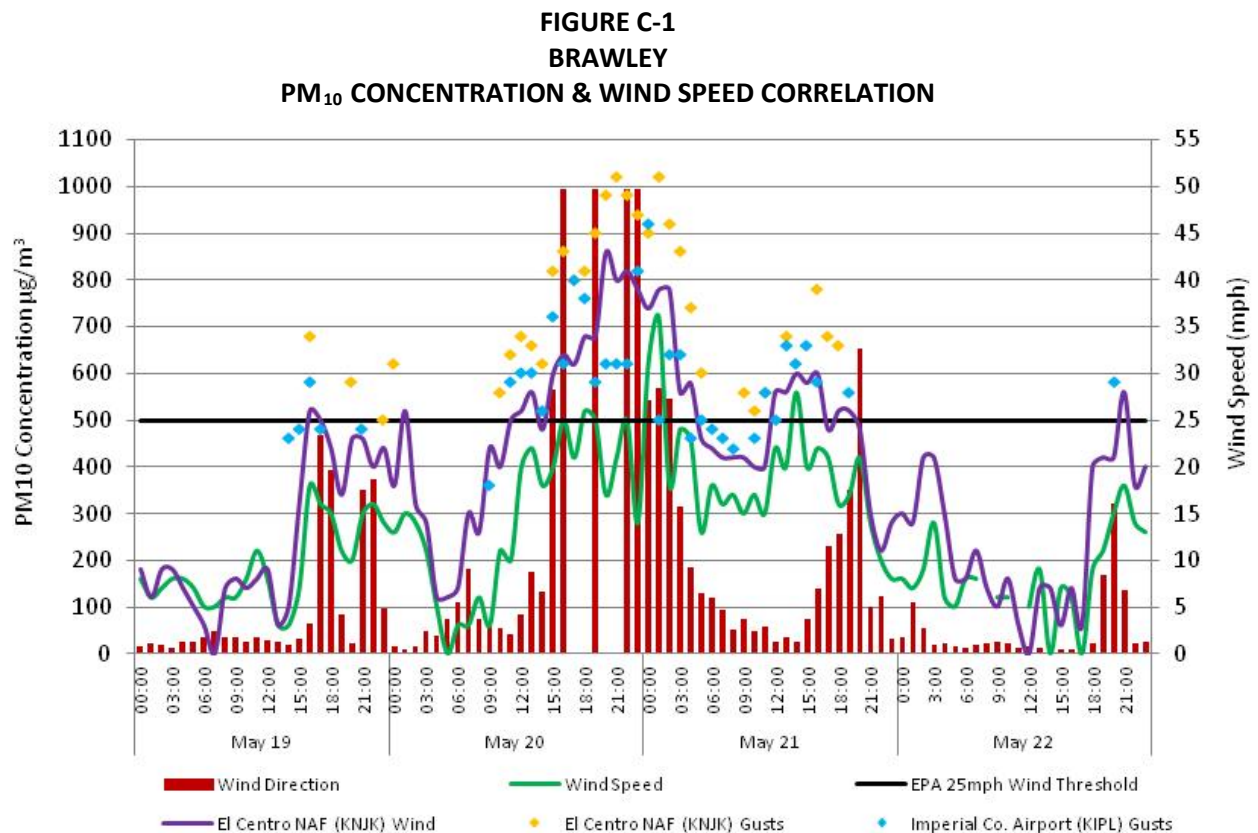


Fig. C-1: Fluctuations in hourly concentrations over 72 hours show a positive correlation with wind speeds, and particularly gusts, at Imperial County Airport (KIPL) and El Centro NAF (KNJKL). Brawley station does not measure wind. Air quality data from the EPA's AQS data bank. Wind data from the NCEI's QCLCD system.

¹ National Weather Service; NOAA's Glossary – Wind Speed: The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust, or squall); <https://w1.weather.gov/glossary/index.php?letter=w>

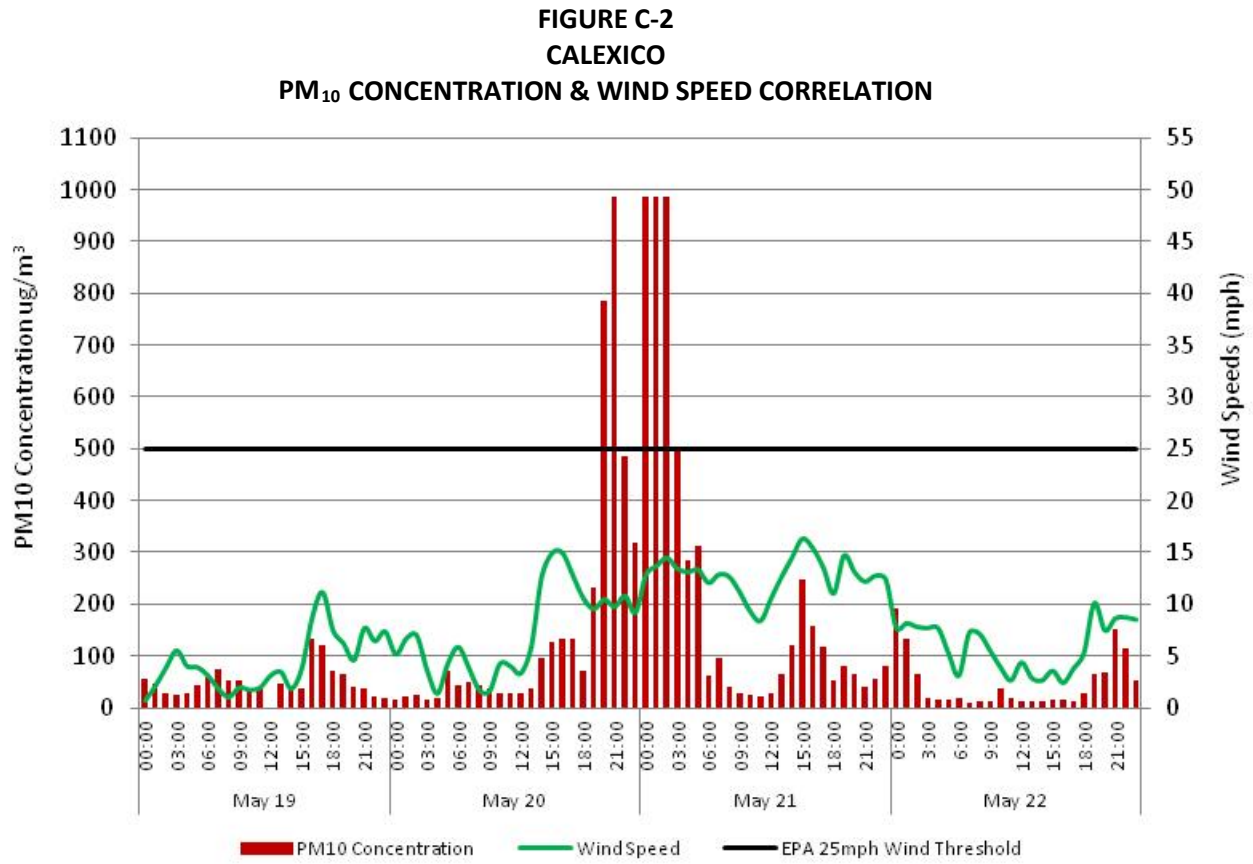


Fig. C-2: Winds at Calexico did not reach the 25 mph threshold. However, the lesser wind speeds allowed for dust to be deposited on the monitor, causing exceedances on May 20 and May 21. Air quality and wind data from the EPA's AQS data bank.

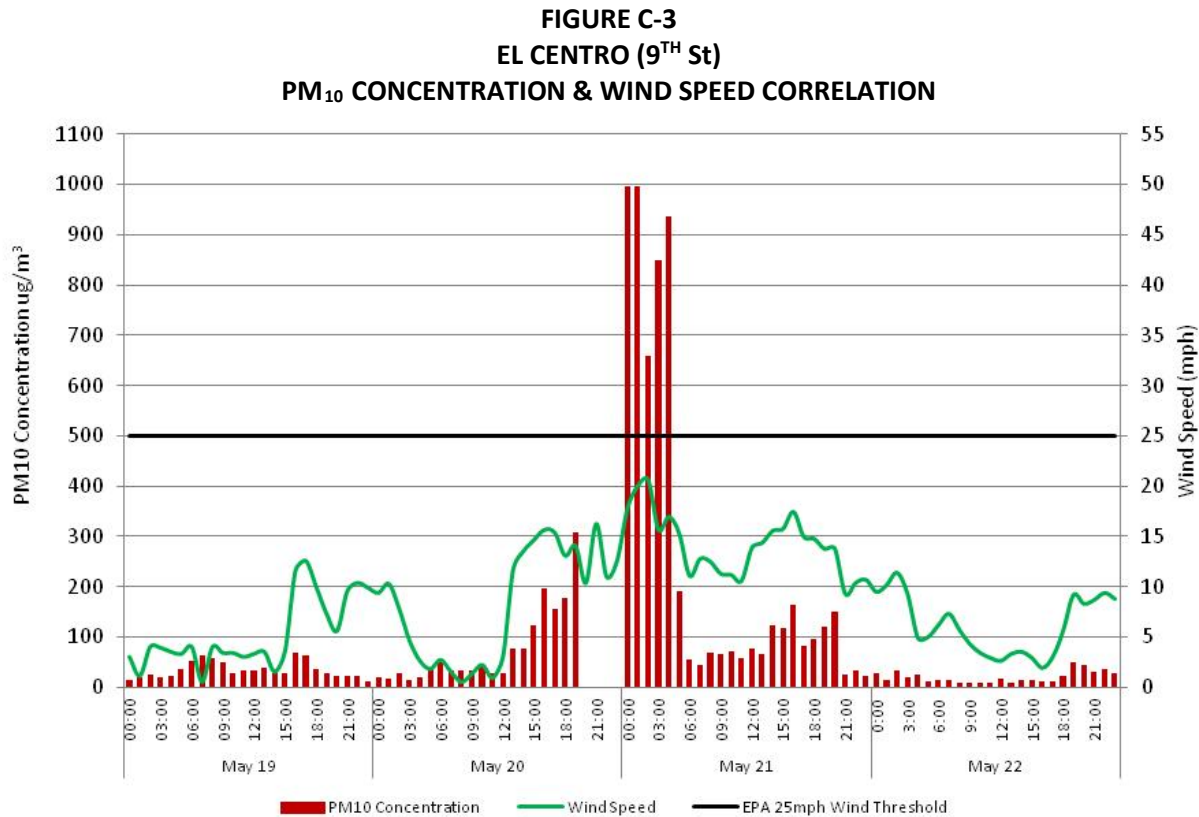


Fig. C-3: Concentrations at El Centro (9th St) did rise in response to an uptick in winds during May 20 and May 21, which pushed the station into an exceedance on May 21. If data was not missing on May 20 due to a power outage for four critical hours, the station likely would have recorded an exceedance on May 20. Air quality and wind data from the EPA's AQS data bank.

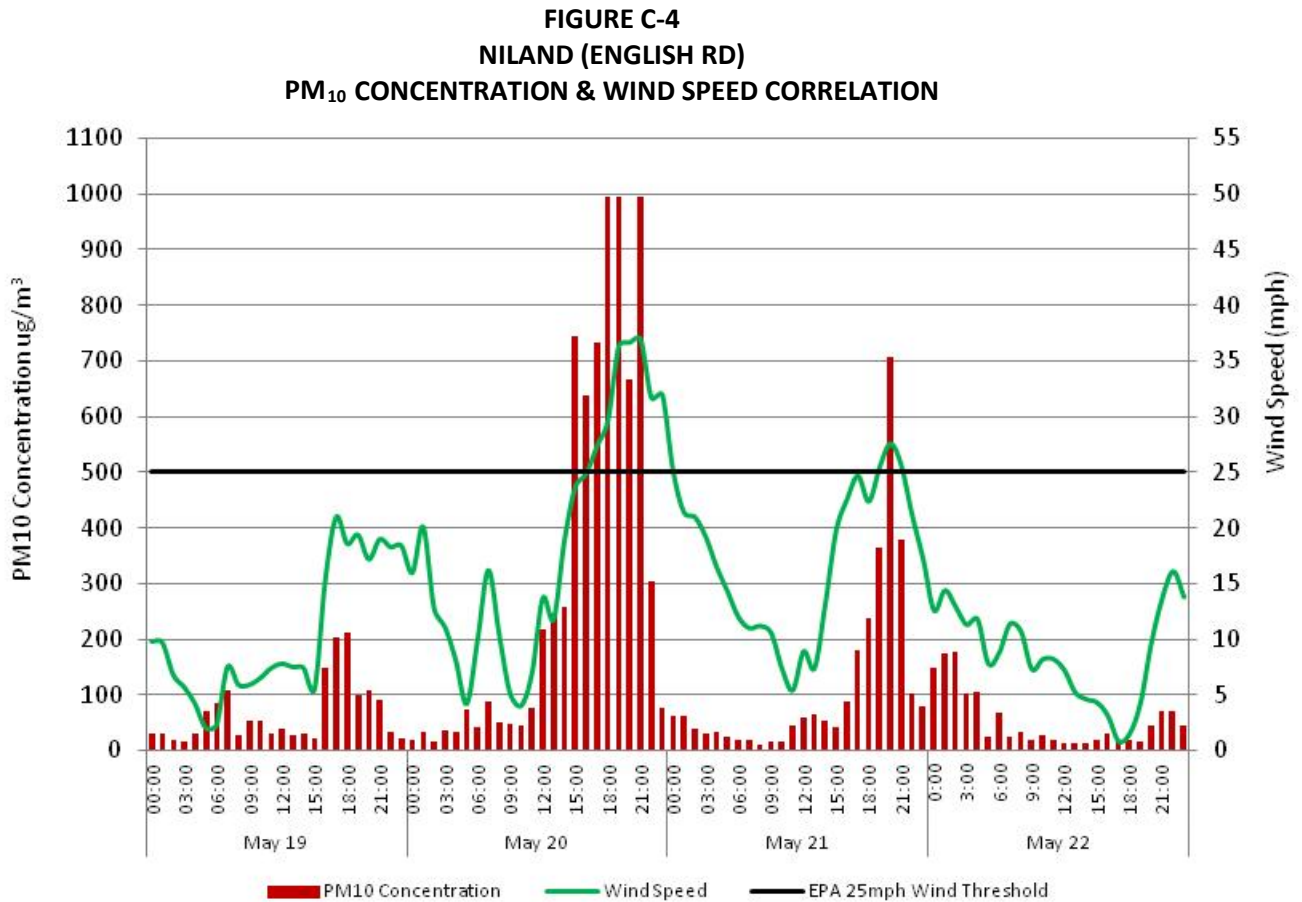


Fig. C-4: Winds at Niland surpassed the 25 mph threshold. Concentrations rose in response to dust being transported downstream to the monitor, resulting in an exceedance on May 20. Air quality and wind data from the EPA's AQS data bank.

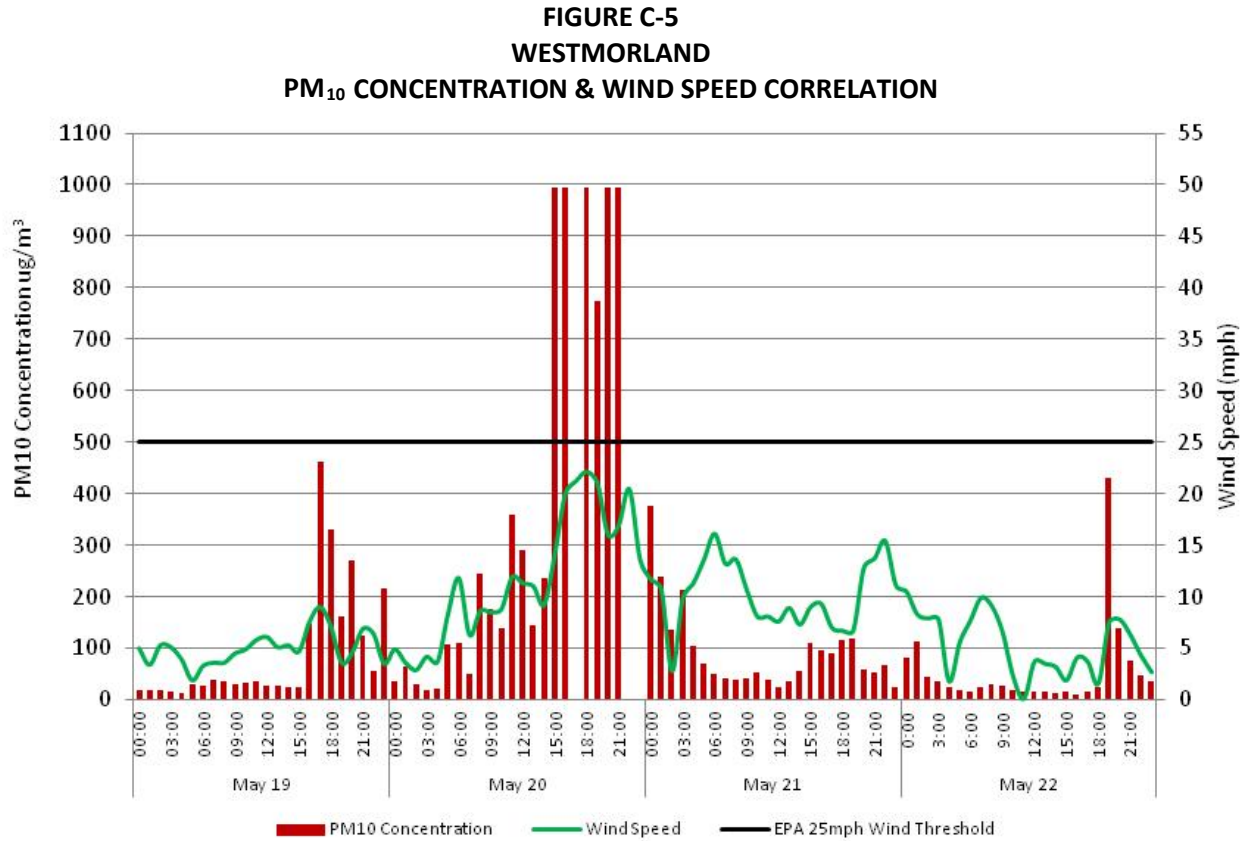


Fig. C-5: Although winds did not surpass 25 mph wt Westmorland station, higher winds upstream transported dust downstream, where lower wind speeds at the station allowed dust to be deposited. Air quality and wind data from the EPA's AQS data bank.

EASTERN RIVERSIDE COUNTY SITES

FIGURE C-6
TORRES-MARTINEZ DESERT CAHUILLA INDIANS RESERVATION
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

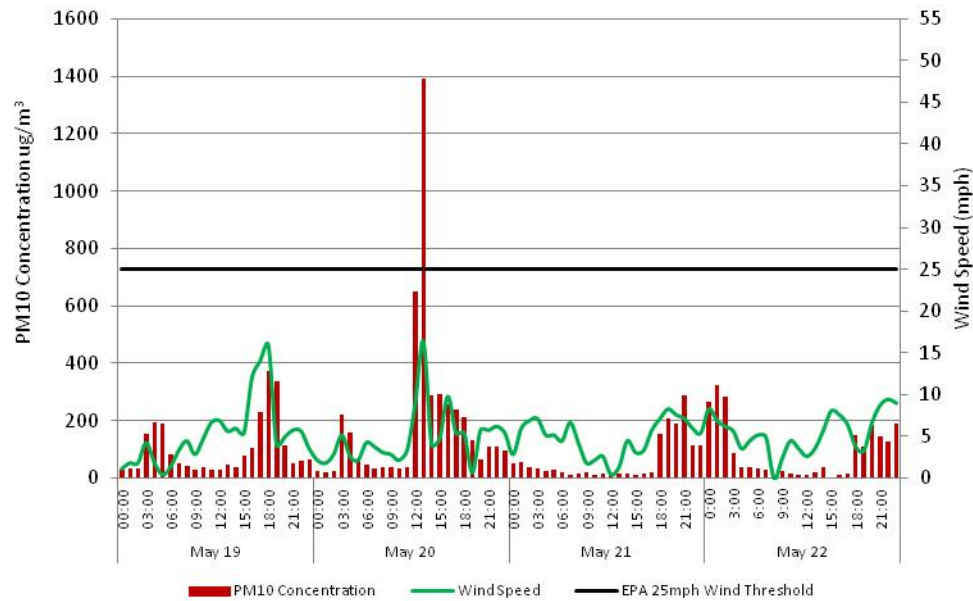


Fig. C-6: Concentrations rose in response to higher winds on May 20 and late on May 21. Air quality and wind data from the EPA's AQS data bank.

FIGURE C-7
INDIO (JACKSON ST)
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

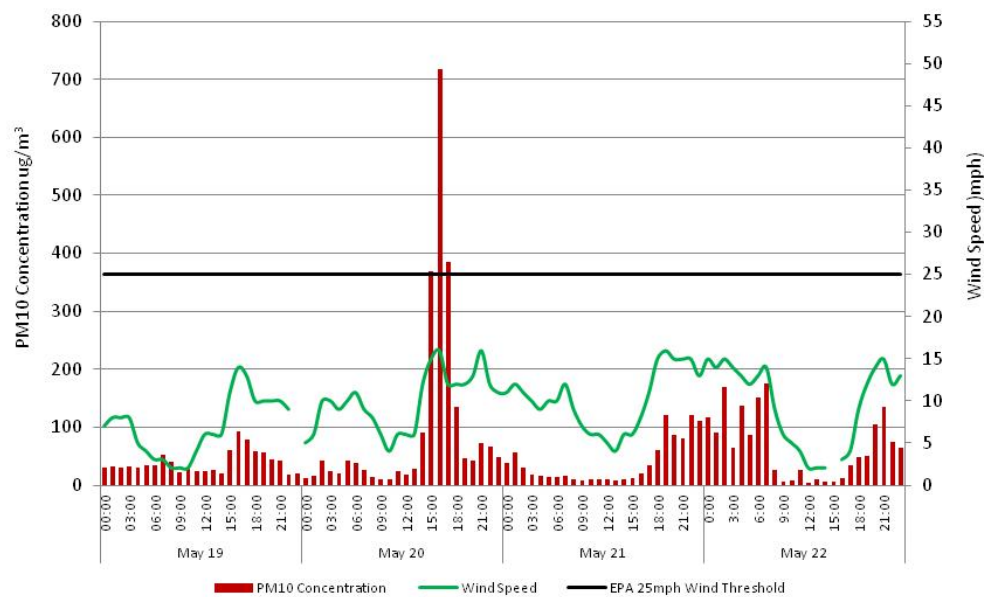
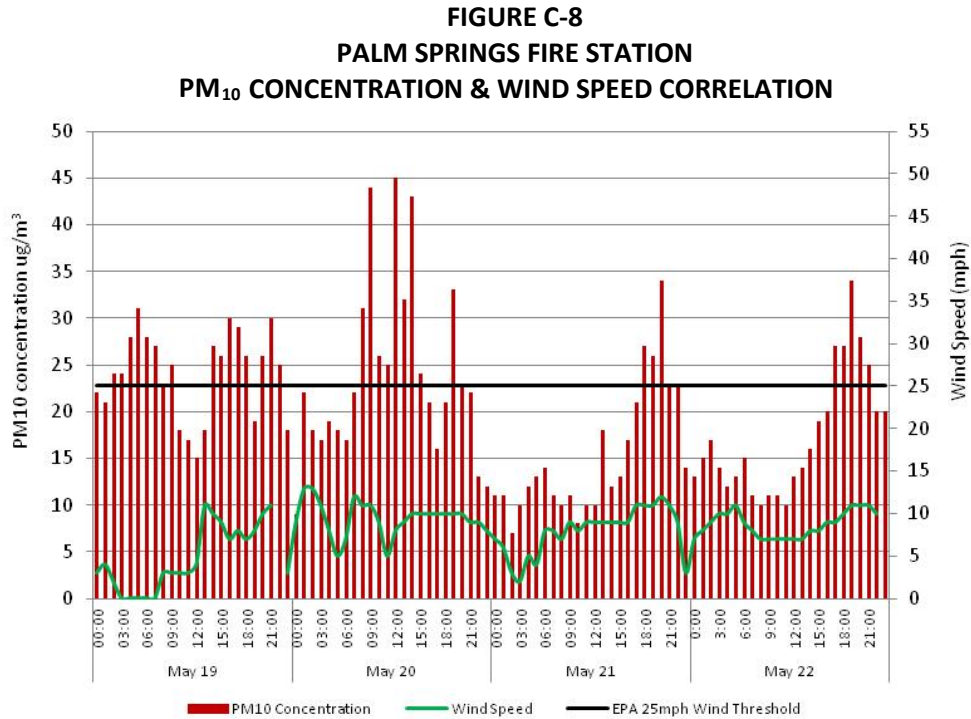
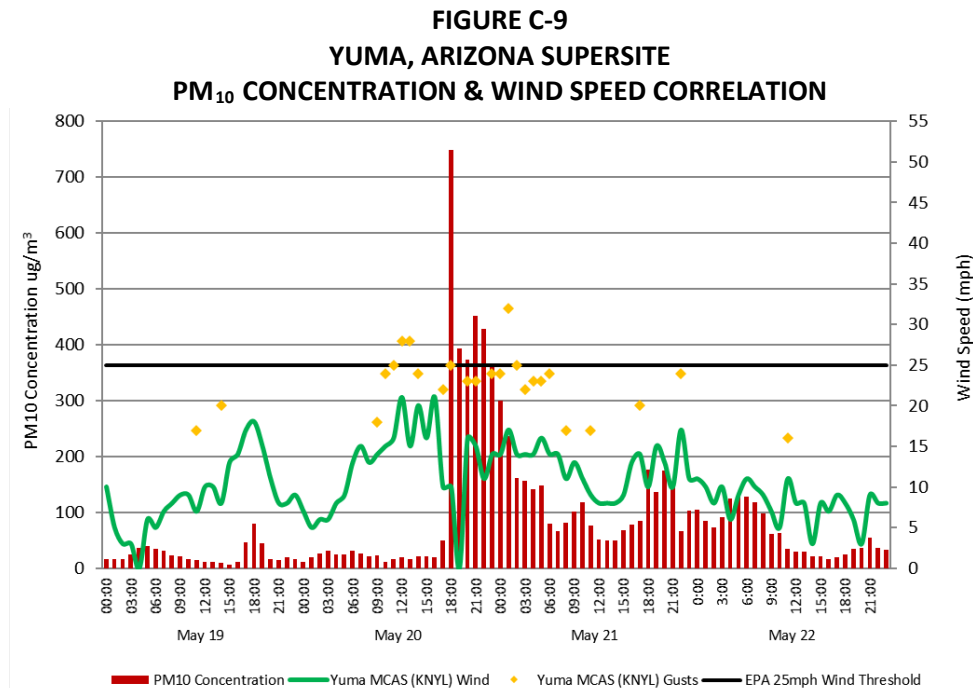


Fig. C-7: Concentrations rose in response to higher winds on May 20 and May 21. Air quality and wind data from the EPA's AQS data bank.



Figs C-8: Concentrations rose in response to higher winds on May 20 and May 21. Air quality and wind data from the EPA's AQS data bank.

SOUTHWESTERN ARIZONA



Figs C-9: Yuma Supersite in Yuma, Arizona, located downstream in the southwestern portion of Arizona, saw corresponding increases in particulate matter as wind speed increased during the May 20 and May 21. Wind data from the NCEI's QCLCD system.